UNION PACIFIC RAILROAD COMPANY

OFFICE OF VICE PRESIDENT-OPERATION

1416 DODGE STREET
OMAHA, NEBRASKA 68179

July 10, 1985

370-001

Alan Biaggi
Environmental Management Specialist
State of Nevada
Department of Conservation and
Natural Resources
Capitol Complex
Carson City, NV 89710

Dear Mr. Biaggi:

Reference your letter of June 14 concerning our hydrological investigation and cleanup report of pipeline leaks at Las Vegas, Nevada.

Have instructed our Division Engineering forces to schedule removal of all grossly contaminated soil as outlined in our report. We will dispose of this soil at the Silver State landfill as directed by the Clark County Health Department.

The pipeline which leaked did not have adequate cathodic protection. Upon discovery of the initial leaks, replacement of this pipeline was scheduled; and on May 29, we completed the installation of a new pipeline totally replacing the line which leaked. The new pipe has factory-applied high-density polyethylene and polypropylene copolymer coating to prevent corrosion and is cathodically protected.

The results of the Railroad's field investigation indicated that lateral migration of the contaminates was inhibited above the caliche layer. In order to determine the extent of lateral migration of the contaminates, areas surrounding the perimeters of the pipeline leaks were excavated and sampled. The lateral migration appeared to be concentrated near the areas where the leaks occurred and to gradually diminish as the distance from the leaks increased. The laboratory analysis of the soil samples confirmed these observations as the concentrations of oil and grease in the soil samples diminished as their distance from the leaks increased. Therefore, the Railroad feels that the impermeable clay layers consisting of cemented sand, silt and gravel mixtures restricted migration of diesel oil within the perimeters of the leaks.

The "solid mass" noted in Paragraph 3 of Page 2 of our report was partially identified when soil excavations were performed during the Railroad's field investigation. Although the precise boundary of this "solid mass" cannot be identified until soil removal is complete, the results of the Railroad's laboratory analysis did provide a good assessment of the probable boundary. This information was utilized in developing the soil removal program. The "solid mass" consisted of dry diesel fuel oil and soil materials. It was assumed that the following factors caused migration of the diesel fuel to result in the solid mass:

(1) the dense clay layers and other soil contents inhibiting diesel fuel migration;

(2) the high temperatures in the area which were warmer than normal spring weather; and

(3) the small amount of precipitation that was experienced in the area.

Will advise further as soon as we have completed removal of all grossly contaminated soil. Should you have any other questions, please feel free to call me at (402) 271-4078.

Yours very truly,

H. P. PATTERSON
Manager-Energy and
Environmental Systems
Room 1214